which may involve other structures derived from the same embryological source. As the majority of detained testes reach the scrotum by the time of puberty, in the absence of complications that demand relief it would seem wise to postpone operation for transplanting the testis in the scrotum until ample time has been given the organ to descend naturally. When operation is undertaken for any reason a effort should be made to trace the vas, and if it is found not to be connected with the testis an anastomosis may be performed, particularly if spermatozoa are present.

THERAPEUTICS

UNDER THE CHARGE OF

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Whooping Cough.—LUTTINGER (*New York Med. Jour.*, 1915, ci, 1043) reports 138 cases of whooping cough treated with stock vaccines prepared by the New York Health Department. Of this series of cases, 115 came under treatment within the first three weeks of the paroxysmal stage. According to Luttinger, the vaccine treatment seems to have decreased the paroxysmal stage by over two weeks when compared to cases in which drugs alone were used. What was more significant to the author, however, than the shortening of the duration of the paroxysmal stage, was the prompt amelioration of the severity of the paroxysms which followed the administration of the vaccine in nearly all cases. On the other hand, the cases treated with drugs, as a rule, showed first a decrease in the number and not in the severity of the individual paroxysms. Luttinger who states that the vaccine seemed to have a prophylactic value when given in sufficiently high dossage.

Progress in the Use of Standard Salvarsanized Serum Intraspinally.—OGILVIE (*Med. Record*, 1915, lxxxvii, 1062) in a former paper, described a method of preparing *in vitro* a salvarsanized serum of standard strength suitable for administration intraspinally in syphilitic disorders of the central nervous system and reported 15 cases which had been treated with the preparation. His present paper deals with the results of continued treatment of the same series of cases. Out of the 15 cases, 13 show a complete disappearance of all subjective manifestations, with improvement in the objective signs in one way or another, for an average period of one year, while one showed moderate improvement only, and one failed utterly to respond to treatment. Of the total number, 11 cases (6 tabes, 3 paresis, 1 syphilitic myelitis, 1 cerebrospinal syphilis) show spinal fluids negative to the Wassermann reaction in all titrations, with normal cell and globulin contents; 2 remain positive, and in 2. recent analyses could not be secured. Ten cases (4 tabes, 4 paresis, 1 syphilitic myelitis, 1 cerebrospinal syphilis) show negative Wassermann reaction in the blood; 3 remained positive, and in 2, recent analyses could not be secured. As to the value of the treatment when systematically and judiciously employed, further comment seems unnecessary to Ogilvie. To those familiar with the resistive and tenacious character of these diseases it will at once be evident, from a study of this and other reports, that the intraspinal method offers far more in the way of therapeutic possibilities than the use of mercury and salvarsan intravenously alone. That the latter are of the greatest importance is readily conceded, but laboratory evidences of syphilis in the spinal fluid are completely eradicated in but few cases treated without intraspinal medication. Ogilvie states that no matter how striking the clinical improvement may be the treatment has been inadequate unless this has been accomplished. He emphasizes that in neurological syphilis the field of greatest opportunity lies in instituting treatment in the predestructive stage. With this end in view the spinal fluid should be subjected to a rigid examination in every case presenting indefinite or transitory symptoms referable to the central nervous system, whether the patient gives a history of syphilis or not and regardless of the existence of a negative Wassermann reaction in the blood.

Pollen Therapy in Hay Fever.—GOODALE (*Boston Med. and Surg. Jour.*, 1915, clxxiii, 42) says that serobiological methods have shown the same phylogenetic relationship of the different plant orders and families. The application of these discoveries to the treatment of hay fever by injection of plant proteids promises to assist in the selection of the specific material for a given case. Definite reactions are elicited in hay fever by the pollen of the exciting plants, when brought into contact with an abrasion of the skin. The intensity of these skin manifestations may be easily diminished by the repeated parenteral administration of the proteids in question. Coincident with the diminution in the skin reactions, there seems to occur an increased tolerance of the exposed mucous membranes to the pollens of the plants employed. Pollen therapy in hay fever may be regarded at the present time as a promising method of treatment, but its value and the permanence of its results remain still to be definitely established.

The Intraspinal Administration of Antitoxin in Tetanus.—NICOLL (*Jour. Amer. Med. Assn.*, 1915, lxiv, 1982) says that the result of a series of animal experiments conducted by Park and himself was conclusive in showing that the intraspinal administration of tetanus antitoxin was far superior to the subcutaneous and intravenous methods of administration. As a result of this experimental work, the following method of treatment is strongly advised by Nicoll: (1) The intraspinal injection of from 3000 to 5000 units into the lumbar region of the spinal canal, preferably under an anesthetic, the volume of fluid injected being brought up to 10 or 15 c.c. by the addition of sterile normal saline, the exact amount being regulated according to the age of the patient and the amount of spinal fluid withdrawn. (2) The intravenous injection of 10,000 units at the same time. (3) The repetition of the intraspinal dose in twenty-four hours. (4) A subcutaneous injection of 10,000 units three or four days later. The well-recognized adjuvants to specific treatment (quiet, subdued light, sedatives, etc.) should be used to supplement the treatment as outlined. Nicoll reports 20 cases of tetanus treated on this plan and gives brief abstracts of the clinical histories of these cases. Of the 20 cases, 16 recovered. The author states that in judging the effect of antitoxin given intraspinally in this series of cases, it must be remembered that the cases were not selected, but that every case of tetanus reported was given the benefit of the treatment regardless of the clinical condition. The series, therefore, may be said to be fairly representative of the type of the disease occurring in and about the City of New York. A few of these patients would undoubtedly have recovered if the intraspinal injection of antitoxin had not been given or without any treatment other than symptomatic. The results obtained, however, in the saving of life are so much more favorable than those in previous years, when large doses of antitoxin were recommended to be given by the intravenous and subcutaneous methods, that there can be no reasonable doubt that the low death rate, 20 per cent., here obtained was largely due to intraspinal dosage.

Intraspinal Therapy in Syphilis of the Central Nervous System.—Swift (*Jour. Amer. Med. Assn.*, 1915, lxv, 209) believes that intraspinal injections of autosalvarsanized serum or serum to which a small amount of salvarsan or mercury is added, is of distinct help in certain cases of tabes and cerebrospinal syphilis. Not all patients with these diseases require intraspinal treatment. Many of them respond well to intravenous injections of salvarsan combined with mercury and iodide properly administered. In other cases, the symptoms and abnormal cerebrospinal fluid are not controlled by general therapy, and it is in this class that we believe the addition of intraspinal therapy to be of value. Both the clinical side and laboratory evidences of active disease should be considered, and any treatment controlled by repeated examinations of the blood and cerebrospinal fluid. Although the treatment of these diseases should be systematic, it should not be so rigid that individual indications should be disregarded. Not infrequently one sees improvement only after active treatment has been discontinued. Others seem to require constant treatment until all evidences of active disease have disappeared. Only by considering all the factors can consistent beneficial results be obtained.

The Starvation Method versus Gradual Carbohydrate Reduction as a Time Saver in the Treatment of Diabetes.—Christian (*British Med. and Surg. Jour.*, 1915, clxxii, 929) says that the starvation method of Allen for rendering a diabetic sugar-free, in addition to being a safe method, has shortened very materially the time required to get a patient with diabetes sugar-free, and so permits of a large part of the patient's stay in the hospital being devoted to building up the patient's tolerance for carbohydrates. To put it another way, the method saves for the patient and for the hospital one or two weeks of time.